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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,066	06/27/2001	Roland A. Wood	H0001858 (256.112US1)	4165

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EXAMINER

GABOR, OTILIA

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,066

Applicant(s)

WOOD, ROLAND A.

Examiner

Otilia Gabor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

1. The amendments filed 05/06/2003 have been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faska et al. (US 2002/0008191 A1).

Faska et al. discloses a dual wavelength band focal plane array for simultaneously detecting two or more selected wavelengths of light on a pixel-registered basis, comprising a semiconductor substrate 70 upon which a first and a second array of pixels 20 and 40 are formed (40 below 20) such that pixels 20 are responsive to a first wavelength and pixels 40 are responsive to a different wavelength (infrared/visible) whereby the infrared and visible signals from the dual wavelength arrays are simultaneously registered so that a full image of the imaged object is generated. The different pixel layers are vertically integrated above the substrate. The light coming from the object first hits the pixel array 20 which absorbs only the radiation having a first wavelength (infrared) and lets through radiation which will be absorbed and detected by pixels 40 which absorbs only light having a different wavelength (visible region).

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Faska et al. fails to specifically disclose that the system is used to aid a driver of an automobile, or that it is used in a heads-up display for an automobile, or that the visible light pixels are adapted to be selective to colors encountered while driving, however given that it is used as a field vision system susceptible to different colors within the infrared and visible range, using it as an aid in an automobile is an obvious matter of design choice since it fulfills the same function, and since it is susceptible to different colors in the visible spectrum, it is obvious that it is susceptible to different colors that one encounters while driving.

Regarding claims 4, 11, 13 Faska fails to disclose that the substrate is made of monolithic silicon and that the photosensor elements are silicon photosensors, however it would have been obvious to use these materials since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960)), and since silicon photosensors are well known and use in the art.

4. Claims 2, 3, 5-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faska et al. and further in view of Yamakawa (U. S. Patent 5929432).

Faska fails to use filters in order to pass only specific colors (red, green, blue) of the visible spectrum to the visible pixel array, however as disclosed by Yamakawa, when specific color detection is desired within the spectrum of incident radiation, specific light filters are used to select only those colors. Since Faska et al. teaches that

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the material used for the photosensors depends on the specific desired wavelength to be detected, it would be obvious to use pixels that are responsive only to the specific filtered light (red, green, blue).

Response to Arguments

5. Applicant's arguments filed 05/09/2003 have been fully considered but they are not persuasive. The main argument presented by the Applicant is that the reference Faska does not disclose a focal plane array that is selective to colors encountered while driving an automobile and is optimal for sensing traffic control colors. This argument is not persuasive however because it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to perform. It does not constitute a limitation in any patentable sense (*In re Hutchinson*, 69 USPQ 138 (CCPA 1946), i.e., since the focal plane array of the present invention and the focal plane array of the reference Faska are similarly construed all that is required of the reference focal plane array is to perform what it is designed for, namely to sense infrared and visible light, which it does. Whether the sensing is done while driving a car is not relevant to its function, for the array will do the same whether or not it is used in a car or a tank or a vision goggle, etc. Also, the limitation in the claim that the array is optimal for sensing traffic colors is not a patentable limitation because the reference Faska is designed to optimally sense all visible light and there is no suggestion in the patent that it is not optimal for any given color in the visible spectrum. As such, the claims are still rejected as shown in detail above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 703-305-0384. The examiner can normally be reached on Monday-Friday between 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is


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703-308-0956.

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May 29, 2003



DAVID PORTA
SUPERVISORY PATENT EXAMINER
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